

Property rights sharing as an economic incentive for biodiversity conservation: lessons from a case study in Madagascar

Jean-Michel SALLES, LAMETA UMR CNRS - ENSA.M – INRA – Univ. Montpellier 1
Martine ANTONA and Estelle MOTTE-BIENABE, CIRAD-TERA, Montpellier, France



(© B. Locantello)

Transferring rights to local communities: slogan, fairness ? Or an efficient way to improve social welfare?

Context

Since the 1990's, decentralization and people's participation in natural resources management have emerged as key trends in government environmental policy in developing countries.

Many studies relates biodiversity loss to institutional failures, such as ill-defined property rights

In Madagascar, in the middle of the 1990's, a contractual policy, known as GELOSE (for "gestion locale sécurisée"), was designed to transfer management of natural resources from central government to rural communities. It was implemented in response to two problems facing biodiversity conservation policy:

- human settlement had been increasing in the protected areas set up by the 1st National Environmental Action Plans (NAEP) since the end of the 1980s;
- no biodiversity management competencies were devolved upon local political structures, reflecting a lack of awareness about customary local multiple uses management.

In search of a theoretical framework for analysing the economic efficiency of decentralization

The Aghion and Tirole model (1997) emphasized two benefits arising from the delegation of formal authority:

- ❖ an increase of the agents initiative or incentive to acquire information
- ❖ an improvement of the agent's participation in the contractual relationship when the issue matters relatively more to the agent (new decision maker) than to the principal (initial owner)

Implementation of the Gelose policy

Prior to the NEAP and the Gelose Act implementation, the central Forestry Administration managed the natural resources according to a timber oriented and well-established legal system of resource harvesting regulation and of taxation (state ownership regime) .

The Gelose consists in:

- ❖ a **contractual framework** for transferring management responsibility for forests and other ecosystems and renewable resources from the central government to local associations (grassroots communities);
- ❖ delimiting **exclusive collective rights** to be transferred to the local community members.
- ❖ **enforced** through a **formal agreement** among the community members (the 'dina').

The first contracting process were initiated in 1997. 32 contracts were already signed in 2001 and 53 on their way.



Centella prunus tree and usages

Four main steps of the contracting process

identifying the stakeholders' interests and claims: information is acquired with the support of a 'mediator'

elaborating medium-term objectives and scenario: managing the conflicts and designing rules

drawing up the contract : commitment to respect a collective management plan

designing control and sanction mechanisms



(© S. Mahony)

How was efficiency consideration achieved in the Gelose implementation ?

A need to assess:

- ❖ **The stakeholders and the contracting parties:** role of the Water and Forestry Administration, of the Municipal councils, of the Local Communities;
- ❖ **The benefits of contracts implementation** for each parties according to the nature and extend of the resources, and the uses covered by the contracts;
- ❖ **The information issue** : is it resolved through the negotiation process in which both parties are strongly incited to state the nature of the resources and uses covered, the boundaries, so as the impact of the rules? The theoretical model obviously supports the idea that local communities should be given the right to manage natural resources over which they are better informed.
- ❖ **The congruence issue:** the theoretical model pointed out the need for congruence between the central government's and the local community's interests. The mediation process can be thought of as a means to achieve lesser dissonance and, therefore, better congruence between the central government and the local community.
- ❖ **The nature of the contract and enforcement issues:** Though the object of the Gelose Act is to transfer management responsibilities, the local community has thus gained formal authority to decide who is allowed to use the natural resource ie exclusion rights. Gelose contracts give local people the right to tailor rules and acquired legal rights. Two main issues are : How these rules and rights should be enforced and how they should result in a better efficiency?



(© S. Mahony)

the Gelose policy remains one of the most interesting experience of right transfer for biodiversity conservation in developing countries.

Références

- Aghion P., J. Tirole, 1997, "Formal and real authority in organisations", *Journal of Political Economy* 105: 1-29.
- Antona M., Motte-Bienabe E., Salles J.-M., Péchard G., Aubert S., Ratsimbarison R., 2004, "Rights transfers in Madagascar biodiversity policies: achievements and significance", *Environment and Development Economics* 9, 825-847.
- Aubert S., 2002, "La Gelose à Madagascar", in M.-C. Cormier-Salem et al, *Patrimonialiser la nature tropicale. Dynamique locale et enjeux internationaux*. Paris, IRD Editions (Colloques et séminaires).
- Péchard G., Antona M., Aubert S., Babin D., 2004, "Des contrats pour l'exploitation de deux ressources phytogénétiques à Madagascar : une approche prospective", *Bois et Forêts des Tropiques*, n° 232.
- Weber J., 1995, "L'occupation humaine des aires protégées à Madagascar : diagnostic et éléments pour une gestion viable", *Natures, Sciences, Sociétés* 3: 157-164.

Biodiversity and Economics for CONservation (BIOECON) is an interdisciplinary network of scientists working to advance economic theory and policy for biodiversity conservation. BIOECON assembles economists, lawyers and scientists from leading European academic and research institutions as well as members of prominent policy organisations to work together on designing and implementing cutting edge economic incentives for biodiversity conservation.

The network is the outgrowth of a project supported by the European Commission under the Fifth Framework Programme, contributing to the implementation of Key Action 2: Global Change, Climate and Biodiversity within the Energy, Environment and Sustainable Development Programme.